SMART LENDER - APPLICANT CREDIBILITY PREDICTION FOR LOAN

APPROVAL

PROJECT REPORT

Submitted by

TEAM ID: PNT2022TMID36233

VIJI T   **110519205017**

SNEHA A   **110519205014**

SREEJA S   **110519205015**

KEERTHANA P   **110519205009**

In Partial Fulfilment for The Award of the Degree

OF

BACHELOR OF TECHNOLOGY

IN

INFORMATION TECHNOLOGY

GOJAN SCHOOL OF BUSINESS AND TECHNOLOGY

REDHILLS.

ANNA UNIVERSITY: CHENNAI – 600 025

NOVEMBER 2022

1.INTRODUCTION

1.1 Project overview

Loan Approval means a statement by the lender setting forth the terms and conditions upon which the lender is will to make a particular mortgage loan to a particular buyer. This data science project will be implemented based on the applicant credit score, income, etc. our country's economy and financial condition is the credit system governed by the banks. The process of bank credit risk evaluation is recognized at bank across the globe. As we know credit risk evaluation is very crucial, there is a variety of techniques or used for risk level calculation.in addition, credit risk is one of the main functions of the banking community. The prediction of credit defaulters is one of the difficult tasks for any bank. As more data becomes available the model becomes more refined and the error decreases meaning then it will be able to predict with the least risk and consuming as less time as it can.

1.2 Purpose

The idea behind this ML project is to build an ML model and web application that the bank can use to classify if a user can be granted a loan or not. The prediction model helps the by minimizing the risk associated with the loan approval system and helps the applicant by decreasing the time taken in the process. The main objective of the project is to compare the loan prediction model made implemented using various algorithms and choose the best one out of them that can shorten the loan approval time and decrease the risk associated with it. It is done by predicting if the loan can be given to that person on the basis ofvarious parameters like credit score, income, age, marital status, gender, etc

2. LITERATURE SURVEY

2.1 Existing problem

Loan status prediction is an effective tool for investment decisions in peer-to-peer (P2P) lending market. In P2P lending market, most borrowers fulfill the repayment plan; however, some of them fail to pay back their loans. Therefore, an Imbalanced classification method can be utilized to discriminate search default borrowers. In this context, the aim of this paper is to propose an investment decision model in P2P lending market which consist of fully paid loans classified via the instance-based entropy fuzzy support vector machine (IEFSVM). IEFSVM is a modified version of the existing entropy fuzzy support vector machine (IEFSVM) in terms of an instance-based scheme. Then, we also provide a multiple regression model to generate an investment portfolio based on non-default loans that are to yield returns. Throughout the experiment, the empirical results reveal that IEFVSM outperforms not only EFSVM but also the six other state-of-the-art classifiers including the cost-sensitive adaptive boosting, cost-sensitive random forest, Easy Ensemble, random under sampling boosting, weighted extreme learning machine, and cost-sensitive extreme gradient boosting in terms of loan status classification.The research and work done by Arora, Nisha and Pankaj Deep Kaur aimed at forecasting whether an applicant can be a loan defaulter or not. It uses Bolasso to select most relevant attributes based on their robustness and then applied to classification algorithms like Random Forest, SVM, Naive Bayes and KNearest Neighbours (KNN) to test how accurately they can predict the results.

2.2 Reference

1. Title: A Novel Noise-Adapted Two-Layer Ensemble model for Credit Scoring Based on Backflow Learning.

   Author: shuang wei1, dongqi yang 2, wenyu zhang 2, and shuai zhang 2.
   Year: 2019

2. Title: Credit Evaluation Ensemble Model with Self-Contained Shunt.

   Author:Wei Li, shuai ding , yi chen, and shanlin yang.
   Year: 2019

3. Title: The Value of Collaboration in Convex Machine learning with Differential Privacy.

   Author: Nan Wu, Farhad Farokhi, David Smith, and Mohamed Ali Kaafar.
   Year: 2020

4. Title: Heterogeneous Ensemble for Default Prediction of Peer-to-Peer Lending in China.

   Author: Wei li, Shuai ding, yi chen, and shanlin yang
   Year: 2018

5. Title: Building up Explainability in Multi-layer Perceptrons for Credit Risk Modeling. Author: Rudrani Sharma and Christoph Schommer , Nicolas Vivarelli .Year: 2020

2.3 Problem statement

| I am	I'm trying to	But	Because	which makes me feel
Account Holder	Apply the loan	Loan cannot be provided by bank	I didn't paid the loan	Financial crisis
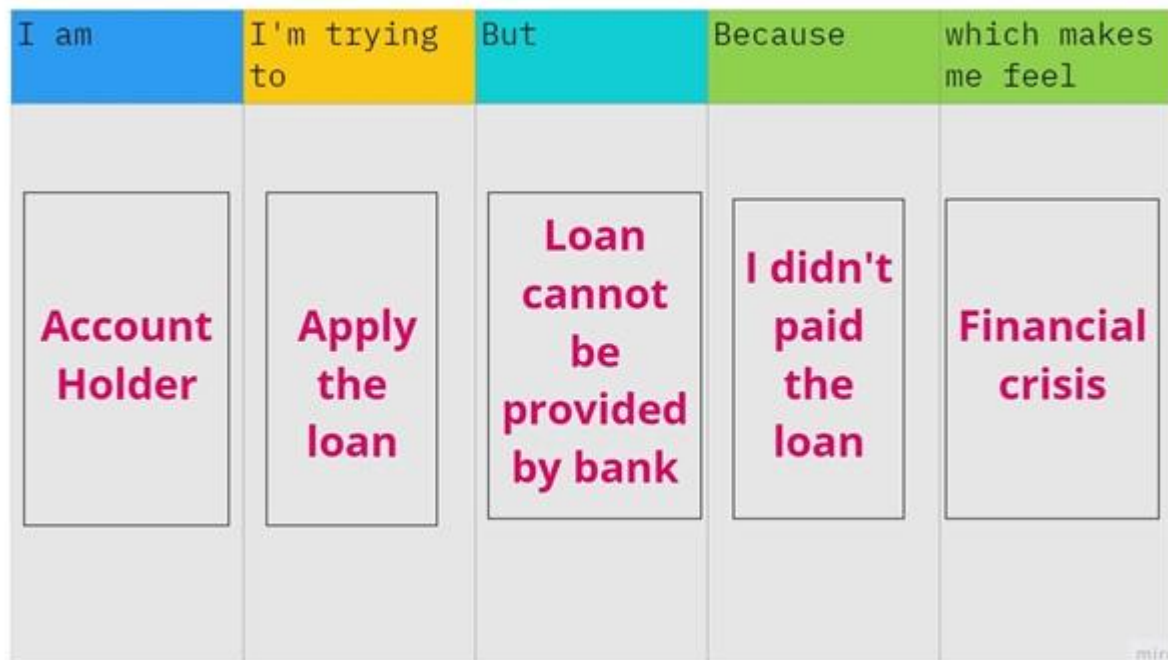
Customers first apply for a home loan after that company validates the customer's eligibility for a loan. The company wants to automate the loan eligibility process (real-time) based on customer detail provided while filling out the online application form.

These details are Gender, Marital Status, Education, Number of Dependents, Income, Loan Amount, Credit History, and others. To automate this process, they have given a problem to identify the customer segments, that are eligible for loan amounts so that they can specifically target these customers.

Understanding the problem statement is the first and foremost step. This would help you give an intuition of what you will face ahead of time. Let us see the problem statement.

3.IDEATION AND PROPOSED SOLUTION

3.1 Empathy map canvas
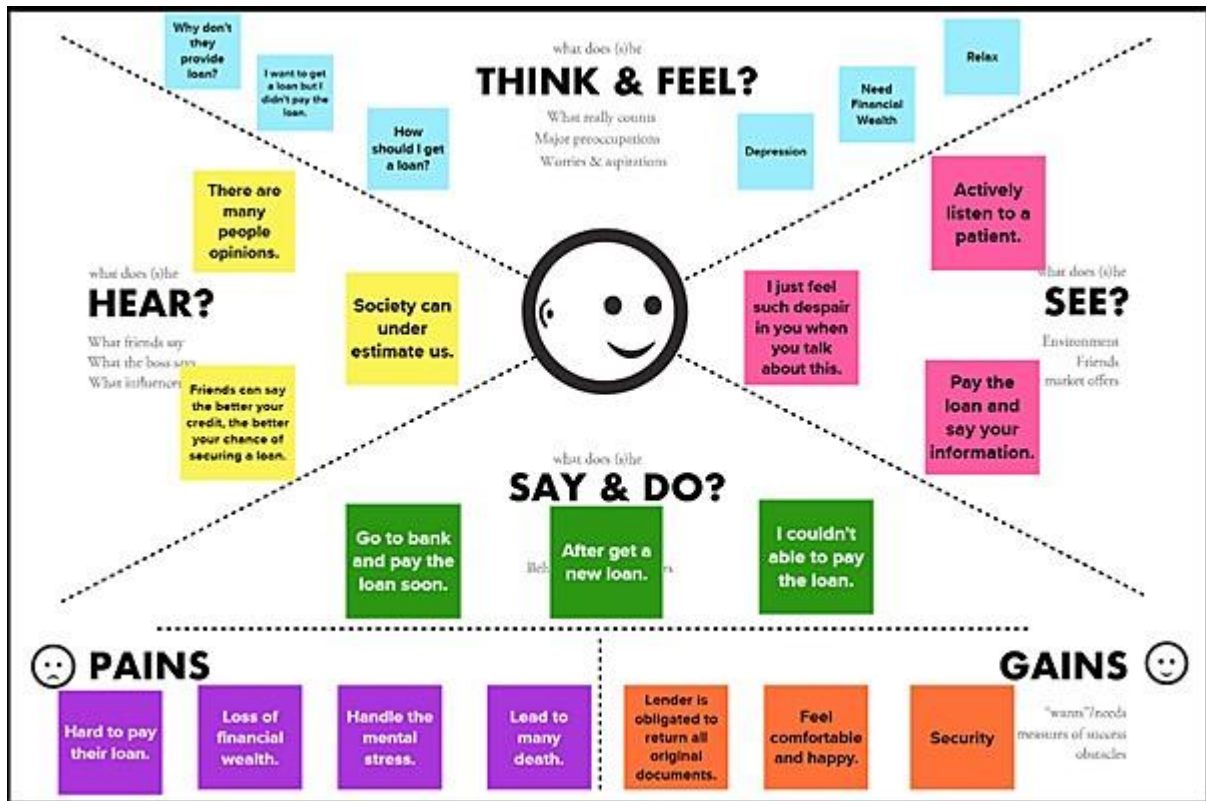
   An empathy map is a collaborative tool teams can use to gain a deeper insight into their customers. Much like a user persona, an empathy map can represent a group of users, such as a customer segment.

   Empathy maps can be used whenever you find a need to immerse yourself in a user's environment. They can be helpful, for example, when:

- diving into the customer segments of a business model canvas

- elaborating on user personas

3.2 Ideation & brainstorming

Ideation is often closely related to the practice of brainstorming, a specific technique that is utilized to generate new ideas. A principal difference between ideation and brainstorming is that ideation is commonly more thought of as being an individual pursuit, while brainstorming is almost always a group activity. More Resources- Communication, Emotional, Intelligence, Hard Skills, Products and Services.

CFI is the official provider of the global Commercial Banking & Credit

Analyst (CBCA)™ certification program, designed to help anyone become a world-class financial analyst.

3.3 proposed solution

S. No.	Parameter	Descrip on
1.	Problem Statement (Problem to be solved)	The customer first applies for a home loan and a er that, the company validates the customer eligibility for the loan
2.	Idea / Solu on descrip on	The predic on of credit defaulters is one of the difficult tasks for any bank. But by forecas ng the loan defaulters, the banks definitely may reduce their loss by reducing their non-profit assets, so that recovery of approved loans can take place without any loss .
3.	Novelty / Uniqueness	Loan predic on approval can use the libraries that can helps to analyse the data. Sta s cal and predic on is very easy comparing to exis ng technologies..
4.	Social Impact / Customer Sa sfac on	Loan approval can predict whether assigning the loan to par cular person will be safe or not.
5.	Business Model (Revenue Model)	In this experiment firstly collect the data and understand the data with help of describe() and then analyses of data then search for any missing data present in the dataset and then

Proposed Solution means the combination of software, hardware, other products or equipment, and any and all services necessary to implement the solution described by Vendor in its Proposal.

3.4 Problem solution fit

This occurs when you have evidence that customers care about certain jobs, pains, and gains. At this stage you have proved the existence of a problem and have designed a value proposition that addresses your customers' jobs, pains and gains. with modifications that meet the Agency's requirements as set forth in the Customer Development Process.

Validate that the problem exists: When you validate your problem hypothesis using real-world data and feedback.

4. REQUIREMENTS

4.1 Functional requirements

FR No.	Func onal Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Requirements	To check the loan eligibility using the credit score, predic on for loan approval
FR-2	User Registra on	Registra on through Form Registra on through Gmail
FR-3	User Confirma on	Confirma on via Email Confirma on via OTP
FR-4	User Authen ca on	By OTP or verifica on code the user gets authen cated and OTP is used for mobile number registra on.
FR-5	Profile Upda on	The user can update their profile when they need to add some informa on.
FR-6	Loan predic on	Predicts the eligibility of loan
FR-7	Display status	User view loan eligibility through website

Functional requirements may involve calculations, technical details, data manipulation and processing, and other specific functionality that define what a system is supposed to accomplish. Behavioural requirements describe all the cases where the system uses the functional requirements, these are captured in use cases.

4.2 Non-functional requirements

FR No.	Non-Func onal Requirement	Descrip on
NFR-1	**Usability**	User friendly Easy to access
NFR-2	**Security**	Secure user data
NFR-3	**Reliability**	Data upda on is easy Itera ve predic on
NFR-4	**Performance**	Rapid accessible Fast and feasible
NFR-5	**Availability**	Sa sfies the user needs
NFR-6	**Scalability**	The system can grow without nega ve influence

In systems engineering and requirements engineering, a non-functional requirement is a requirement that specifies criteria that can be used to judge the operation of a system, rather than specific behaviours. They are contrasted with functional requirements that define specific behaviour or functions.

Non-functional requirements equate to other requirements than functional requirements. This unit needs to define standard methods to select the functionality of the system, rather than specific behaviour. A unit of non-functional requirements within the "system will" style, linking the entire system property as a whole or of something and not a specific function.

5.PROJECT DESIGN

5.1 Data flow diagrams

   A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored. A data-flow diagram is a way of representing a flow of data through a process or a system. The DFD also provides information about the outputs and inputs of each entity and the process itself.
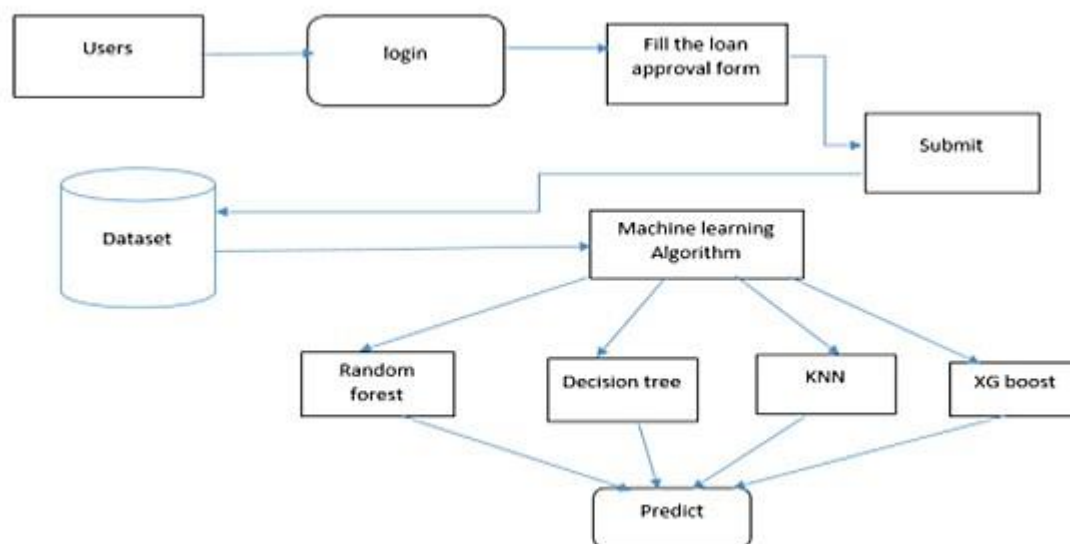
   DFDs make it easy to depict the business requirements of applications by representing the sequence of process steps and flow of information using a graphical representation or visual representation rather than a textual description.

5.2 Solution & technical architecture
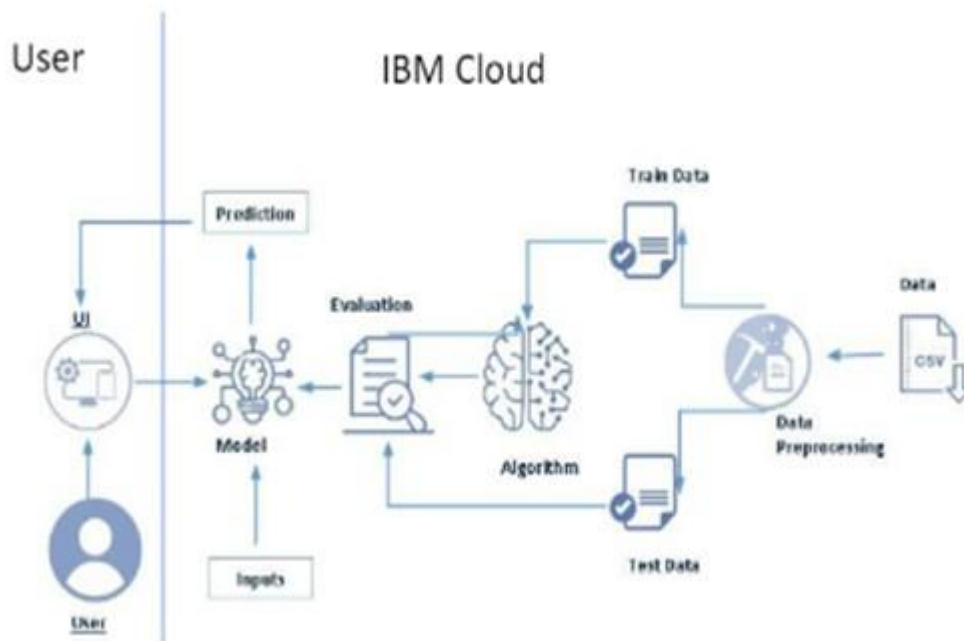
Technical Architecture (TA) is a form of IT architecture that is used to design computer systems. It involves the development of a technical blueprint with regard to the arrangement, interaction, and interdependence of all elements so that system relevant requirements are met.

It is responsible for building three primary types of architecture within an enterprise. These areas are application architecture, system architecture, and enterprise architecture and has technology knowledge. The architect has design skills. The architect has programming skills. The architect is a good communicator

5.3 User stories

User Type	Functional Requireme nt (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Mobile user)	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	I can access my account / dashboard	High	Sprint-1
		USN-2	As a user, I will receive confirmation email once I have registered for the application	I can receive confirmation email & click confirm	High	Sprint-1
Browser	Login	USN-3	As a user, I can log into the application by entering email & password		High	Sprint-1
	Dashboard	USN-4	Should be able to access the dashboard.	Access the dashboard.	Low	Sprint-3
	Check for loan eligibility	USN-5	Fill the application with the details of the borrower.	Check the eligibility of the borrower.	High	Sprint-4

	Prediction of loan approval	USN-6	Fill the application to check if the loan will be approved or not.	Check for the chances of loan approval. If the loan will not be approved for the current amount, find the amount	High	Sprint-4
				that will be approved by the lender		
Clarificatio ns	Chat bot	USN-7	Ask doubts to the chat bot	Getting clarified on the doubts	Medium	Sprint-2

A user story is an informal, general explanation of a software feature written from the perspective of the end user or customer.The purpose of a user story is to articulate how a piece of work will deliver a particular value back to the customer.

6. PROJECT PLANNING & SCHEDULING

6.1 project planning & estimation

Planning and Estimation are essential in software projects to achieve predictability, reduce the risks involved, and set a basic expectation for all stakeholders.

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	2	High	A SNEHA S SREEJA
Sprint-1		USN-2	As a user, I will receive confirmation email once I have registered for the application	1	High	T VIJI P KEERTHANA
Sprint-1		USN-3	As a user, I can register for the application through Gmail	2	Medium	A SNEHA S SREEJA
Sprint-2	Login	USN-4	As a user, I can log into the application by entering email & password	1	High	T VIJI P KEERTHANA
Sprint-2		USN-5	As a user, I can access the dashboard to check my loan available status.		High	A SNEHA S SREEJA

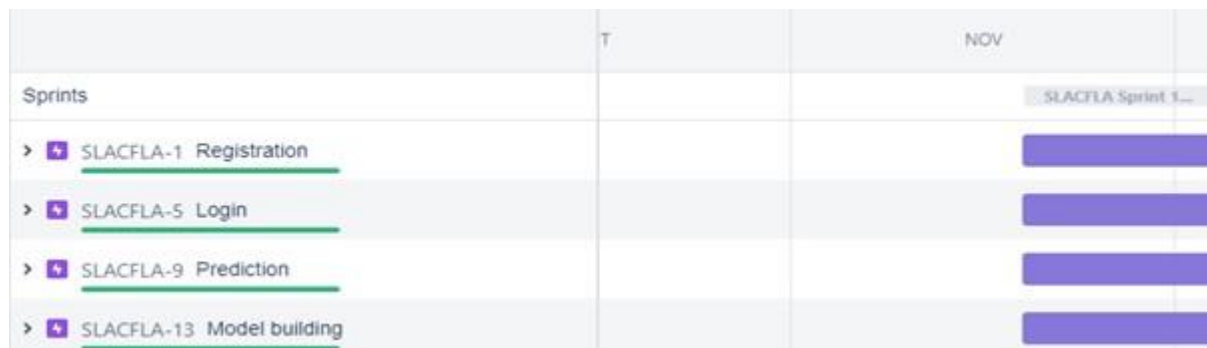| Sprint		USN-6	As a user, I can enter the data which I have and also the data which the website asks to me to predict	6	Very High	T VIJI P KEERTHANA
Sprint-2		USN-6	As a user, I can enter the data which I have and also the data which the website asks to me to predict	6	Very High	T VIJI P KEERTHANA
Sprint 3	Prediction	USN-7	As I have given the data into the webpage now the data can be predicted for the loan avail	4	Medium	A SNEHA S SREEJA
Sprint-3		USN-8	As a user, I require global access to the web page as a user	3	Low	T VIJI P KEERTHANA
Sprint-3	Deployment of AI model in the cloud	USN-9	Model could be running on the cloud	3	Low	A SNEHA S SREEJA
Sprint-4	Model building	USN-10	I REQUIRE AN ML model that can credit defaulters	5	High	T VIJI P KEERTHANA
Sprint-4		USN-11	As a user , I need medium to enter my data	4	Medium	A SNEHA S SREEJA

6.2 Sprint Delivery Schedule

When a sprint ends, the team shows their work to the project owner, who reviews it. If the project meets expectations, the team moves on to the next sprint. The definition of a sprint is a dedicated period of time in which a set amount of work will be completed on a project. It's part of the agile methodology, and an Agile project will be broken down into a number of sprints, each sprint taking the project closer to completion**.**

Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed (as on Planned End Date)	Sprint Release Date (Actual)

Sprint-1	20	6 Days	24 OcT 2022	29 Oct 2022	11	30 Oct 2022
Sprint-2	20	6 Days	31 Oct 2022	05 Nov 2022	11	07 Nov 2022
Sprint-3	20	6 Days	07 Nov 2022	12 Nov 2022	11	14 Nov 2022
Sprint-4	20	6 Days	14 Nov 2022	19 Nov 2022	11	20 Nov 2022

6.3 Reports from JIRA

7. CODING & SOLUTIONING

7.1 Feature 1

Welcome To Loan Prediction

Loan Approval is based on lot of this, rather than going to a bank and getting rejected. We made it simple that you can get your loan approval prediction by our machine learning model, for to predict we need some of your information

Predict
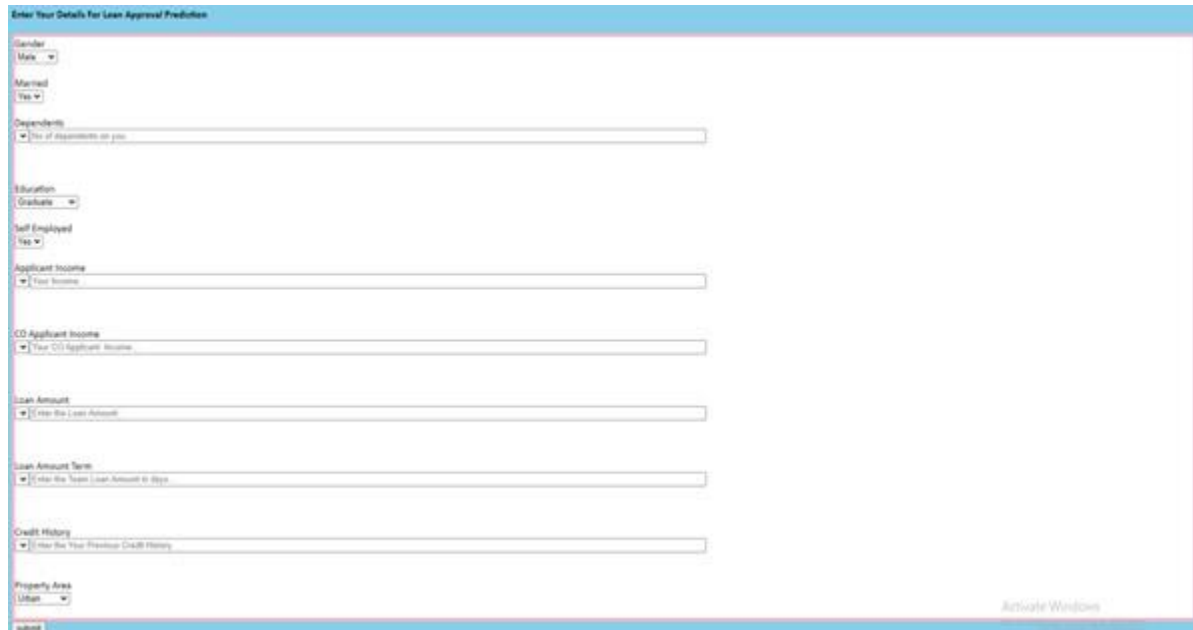
   A home page is the primary web page that a visitor will view when they navigate to a website via a search engine, and it may also function as a landing page to attract visitors. Home page is also a web page but is being considered as the starting page of your website with the navigation bar that provides links to different sections with in the particular website. Home page can have lots of information, links, and sources and the purpose it is provide plenty of information and resources to potential customers. For Example: A Website home page often has standard links at the top of the page and often at the side of the page for items like,

- HOME

- ABOUT

- CONTACT

- GET STARTED

7.2 Feature 2

The user must enter the details that helps to predict the loan status whether it is available or not. When you click on Submit button from left button corner you will get redirected to Submit.html

7.3 Database schema

8. TESTING

8.1 Test Cases

Pre-train tests: The intention is to write such tests which can be run without trained parameters so that we can catch implementation errors early on. This helps in avoiding the extra time and effort spent in a wasted training job.

| Section	Total Cases	Not Tested	Fail	Pass
Print Engine	7	0	0	7
Client Application	51	0	0	51
Security	2	0	0	2
Outsource Shipping	3	0	0	3

8.2 User acceptance testing

Purpose of Document: The purpose of this document is to briefly explain the test coverage and open issues of the [Smart Lender - Applicant Credibility Prediction for Loan Approval] project at the time of the release to User Acceptance Testing (UAT).

Resolution	Severity 1	Severity 2	Severity 3	Severity 4	Subtotal
By Design	10	4	2	3	20
Duplicate	1	0	3	0	4
External	2	3	0	1	6
Fixed	11	2	4	20	37
Not Reproduced	0	0	1	0	1
Skipped	0	0	1	1	2
Won't Fix	0	5	2	1	8
Totals	24	14	13	26	77

9. RESULTS

9.1 Performance Metrices

LOAN APPROVAL PREDICTION

Loan will be Approved
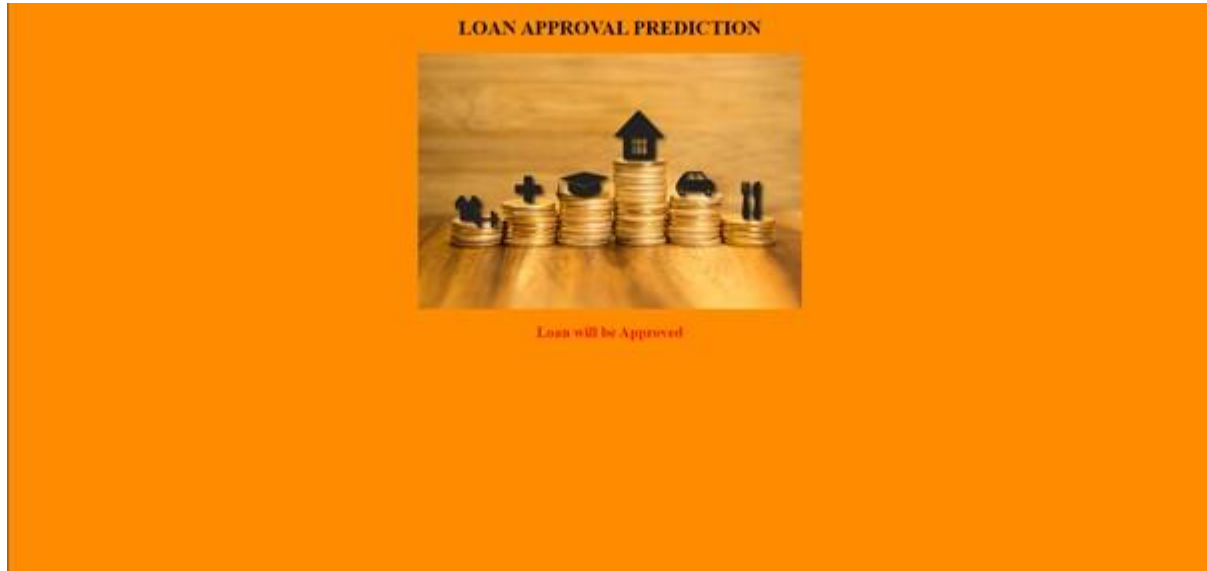
   The predictive models based on Logistic Regression, Decision Tree and Random Forest, give the accuracy as 80.945%, 93.648% and 83.388% whereas the cross-validation is found to be 80.945%, 72.213% and 80.130% respectively. This shows that for the given dataset, the accuracy of model based on decision tree is highest but random forest is better at generalization even though it's cross validation is not much higher than logistic regression.

10. ADVANTAGES & DISADVANTAGES

Advantages:

- Manual processing of loan applications is a long, cumbersome, error-prone, and often biased process.

- It might lead to financial disaster for banks and obstruct genuine applicants from getting the needed loans.

- Loan Prediction using machine learning tools and techniques can help financial institutions quickly process applications by rejecting high-risk customers entirely, accepting worthy customers, or assigning them to a manual review.

- Such processes with loan prediction using machine learning intact can reduce loan processing times by nearly 40%.

- The key principle that the system uses here is the inductive methods for the attributes and determine the eligibility condition for the specific applicant.

- There is also a need to do a demographic analysis to identify the defaulters and understand the nature of the scoped transactions so that in future those can be identified and triggered at the beginning.

- Machine learning technique is very useful in predicting outcomes for large amount of data.

Disadvantages:

- The disadvantage of this model is that it Emphasize different weights to each factor but in real life sometime loan can be approved on the basis of single strong factor only, which is not possible through this system.

- Predicting loan defaulters is an important process of the banking system as it

  directly affects profitability.

- However, loan default data sets available are highly imbalanced which results in poor performance of the algorithms.

- To automate this process, they have given a problem to identify the customer segments, that are eligible for loan amounts so that they can specifically target these customers.

- Loan prediction is a very common real-life problem that each retail bank faces at least once in its lifetime. If done correctly, it can save a lot of man-hours at the end of a retail bank.

- Although this course is specifically built to give you a walkthrough of the Loan Prediction problem, you can always refer to the content to get a comprehensive overview to solve a classification problem.

- It's a classification problem, given information about the application we have to predict whether the they'll be to pay the loan or not.

11. CONCLUSION

This application is working properly and meeting to all Banker requirements. This component can be easily plugged in many other systems. It works correctly and fulfils all requirements of bankers and can be connected to many other systems. There were multiple malfunctions in the computers, content errors and fixing of weight in computerized prediction systems. In the near term, the banking software could be more reliable, accurate, and dynamic in nature and can be fit in with an automated processing unit. There have been numbers cases of computer glitches, errors in content and most important weight of features is fixed in automated prediction system more secure, reliable and dynamic weight adjustment. The system is trained on old training dataset in future software can be made such that new testing date should also take part in training data after some fix time. Machine learning helps to understand the factors which affect the specific outcomes most. Other models like neutral network and discriminate analysis can be used individually or combined for enhancing reliability and accuracy prediction.

12. FUTURE SCOPE

In future, this model can be used to compare various machine learning algorithm generated prediction models and the model which will give higher accuracy will be chosen as the prediction model. This paper work can be extended to higher level in future. Predictive model for loans that uses machine learning algorithms, where the results from each graph for the paper can be taken as individual criteria for the machine learning algorithms.

13.APPENDIX

Source code

Home.html

```html
<html>

<head>

<style> Body {

background-color: pink;

}

</style>

<h1><b>Welcome To Loan Prediction</b></h1>

<p>Loan Approval is based on lot of this, rather than going to a bank and getting
rejected. We made it simple that you can get your loan approval prediction by our
machine learning model, for to predict we need some of your information</p>

</head>

<body>

<center>

<img src="{{ url_for('static',filename = 'loan.jpeg')}}" alt="not found" >

</center>
```

```html
<a href="/predict">Predict</a>

</html>
```

Predict.html

```html
<!DOCTYPE html>

<html>

<head>

    <b>Enter Your Details For Loan Approval Prediction</b>

<style>   body{

 font-family: Calibri;

 background-color:Skyblue ;

} form { border-style:

solid; border-

color:lightpink ; border-

width: 5px 5px;

background-

color:white;

}

</style>
```

```html
</head>

<br><br>

<body>

<form action="/submit" method="post">

<label> Gender </label><br>

   <select name="Gender" id="Gender" class="Input">

    {% for o in gender %}

    <option value="{{ o.gender }}">{{ o.gender }}</option>

    {% endfor %}

   </select>     <br><br>

 <label for="">Marriage Status</label><br>

   <select name="Married" id="Married" class="Input">

    {% for o in mar %}

    <option value="{{ o.married }}">{{ o.married }}</option>

    {% endfor %}

   </select> <br><br>

 <label> Dependents </label><br>
```

```html
 <input  type="text"  id="Dependents"  name="Dependents"  placeholder="No.of
dependents on you" size="150"/> <br> <br>

 <label for="">Education</label><br>

 <select name="Education" id="Education" class="Input">

   {% for o in edu %}

   <option value="{{ o.education }}">{{ o.education }}</option>

   {% endfor %}

 </select><br><br>

 <label for="">Self_Employed</label><br>

 <select name="Self_Employed" name="Self_Employed" class="Input">

   {% for o in sel %}

   <option value="{{ o.sel_emp }}">{{ o.sel_emp }}</option>

   {% endfor %}

 </select><br><br>

   <label for="AI">AmountIncome</label>

 <input type="text" id="AI" name="AI">

 <br><br>

 <label for="CI">Co-applicantIncome</label>
```

```html
<input type="text" name="CI" id="CI">

<br><br>

<label for="LA">Loan_Amount</label>

<input type="text" name="LA" id="LA">

<br><br>

<label for="LAT">Loan_Amount_Term</label>

<input type="text" name="LAT" id="LAT">

<br><br>

<label for="CH">Credit_History</label>

<input type="text" name="CH" id="CH">

<br><br>

<label for="">Property_Area</label><br>

<select name="Property_Area" id="Property_Area" class="Input">

  {% for o in pa %}

  <option value="{{ o.property_area }}">{{ o.property_area }}</option>

  {% endfor %}

</select>

<br><br>
```

```
  <input type="submit" value="submit">

</form>

</body>

</html>
```

Submit.html

```
<!DOCTYPE html>

<html>

<head><h1><center>LOAN APPROVAL PREDICTION</h1></center>

<style> body{

    background-color:#ff8c00; background-repeat:no-

repeat; background-size:100% 100%;

} h2{

color:red

;



}

</style>

</head>
```

```html
<body>

<center>

<img src="{{ url_for('static',filename = 'loan predict.jpeg')}}" alt="not found"

><br>

<h2>

{{ result }}

</h2>

</center>

</body>

</html>
```
App.py from flask import

Flask,render_template, request import pandas

as pd import numpy as np import pickle import

os app = Flask(__name__) model =

pickle.load(open('model.pkl','rb'))

@app.route('/') #rendering the html

templates def home(): return

```python
render_template("home.html")

@app.route('/predict') def predict():

    gender =[ {'gender': 'Female'}, {'gender': 'Male'}]

    mar = [{'married':'Yes'},{'married':'No'}]

    edu = [{'education':'Graduated'},{'education':'Not-Graduate'}]

    sel = [{'sel_emp':'Yes'},{'sel_emp':'No'}]
pa=[{'property_area':'Urban'},{'property_area':'Semiurban'},{'property_area':'Rural'
}]

                          return
render_template("predict.html",gender=gender,mar=mar,edu=
edu,sel=sel,pa=pa)

@app.route('/submit',methods=['GET','POST']) def

submit():

    if request.method == 'POST':

        gen = request.form['Gender']

        print(gen)

        if gen == 'Female':

            gen = 0
```

```python
    else:

       gen = 1

    mar = request.form['Married']

    print(mar)

    if mar == 'Yes':

       mar = 1

    else:

       mar= 0

    dept = request.form['Dependents']

    print(dept)

    edu = request.form['Education']

    print(edu)

    if edu == 'Graduated':

       edu = 0

    else:

       edu = 1

    sel = request.form['Self_Employed']

    print(sel)
```

```python
if sel == 'Yes':

 sel = 0 else:

    sel = 1


ai = request.form['AI']

print(ai)

ci = request.form['CI']

print(ci)

la = request.form['LA']

print(la)

lat = request.form['LAT']

print(lat)

ch = request.form['CH']

print(ch)

pa = request.form['Property_Area']

print(pa)

if pa =='Rural':

    pa = 0
```

```python
    elif pa == 'Semi_urban':

     pa = 1 else:

        pa = 2

    print(gen,mar,dept,edu,sel,ai,ci,la,lat,ch,pa)

    input_feature=[gen,mar,dept,edu,sel,ai,ci,la,lat,ch,pa]

    input_feature=[np.array(input_feature)]

    print(input_feature)

    names= ['Gender', 'Married', 'Dependents', 'Education', 'Self_Employed',

        'Applicant_Income', 'Co-applicant_Income', 'Loan_Amount',

        'Loan_Amount_Term', 'Credit_History', 'Property_Area']

    print(input_feature)

    data =pd.DataFrame(input_feature,columns=names)

    print(data)

    prediction=model.predict(data)

    print(prediction)

    prediction=int(prediction)

    print(type(prediction))

    if(prediction==0):
```

```
        return render_template("submit.html",result="Loan will not be Approved")

    else:

        return render_template("submit.html",result="Loan will be Approved")

if __name__ == '__main__':

app.run()
```

Github & project demo link

https://github.com/IBM-EPBL/IBM-Project-39604-
1660463929/blob/main/Final%20Deliverables/project%20Demo.mp4

https://github.com/IBM-EPBL/IBM-Project-39604-1660463929